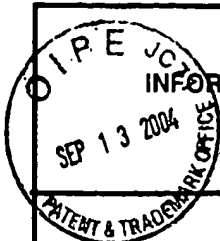


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				APPLICANT(S) Smith et al.			
				FILING DATE 3/2/2004		GROUP ART UNIT 3744	
U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
ml	2,549,464	4/1951	Hartley				
w	2,836,033	5/1958	Marrison				
U.S. PATENT APPLICATION PUBLICATIONS							
*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
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DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION		
					YES	NO	
ms	EP0614059 A1	3/1994	Europe	—	—		
ms	EP0678715 A1	4/1994	Europe	—	—		
ms	GB2237866	10/1990	Great Britain	—	—		
ms	WO02/087279 A2	10/2002		—	—		
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
ms	Garrett, Steven, "ThermoAcoustic Life Sciences Refrigerator," Oct. 30, 1991, pp 4-43.						
ms	Ceperley, Peter H., "A pistonless Stirling engine - The traveling wave heat engine," J. Acoust. Soc. Am, 66 (55), Nov. 1979, pp. 1508-1513.						
EXAMINER			DATE CONSIDERED				
			3-16-06				
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ATTY DOCKET NO.

PST-10703/36

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10/791,497

Smith et al.

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3744

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
nd	3,513,659	5/1970	Martini	62	6	
nd	3,548,589	12/1970	Cooke-Yarborough	60	24	
nd	3,604,821	9/1971	Martini et al.	417	379	
nd	3,991,585	11/1976	Mulder	62	6	
nd	4,036,018	7/1977	Beale			

U.S. PATENT APPLICATION PUBLICATIONS

*EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

nd		Gedeon, David, "DC Gas Flows in Stirling and Pulse Tube Cryocoolers," Cryocoolers 9, Edited by R.G. Ross, Jr., Plenum Press, NY, 1997, pp. 385-392
nd		Wakelane, Ray Scott, "Use of Electrodynamic Drivers in Thermoacoustic Refrigerators," J. Acoust. Soc. Am. 107(2), Feb. 2000, pp. 827-832.

EXAMINER

William C Doerflinger

DATE CONSIDERED

3-16-06

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
zw	RE29,518	1/1978	Franklin	60	520		
zw	4,114,380	9/1978	Ceperley				
zw	RE30,176	12/1979	Beale	60	520		
zw	4,355,517	10/1982	Ceperley				
zw	4,398,398	8/1983	Wheatley et al.				

U.S. PATENT APPLICATION PUBLICATIONS							
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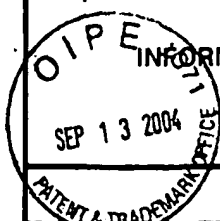
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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION		
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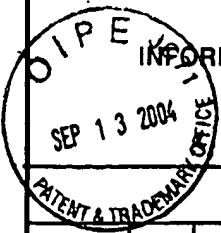
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
zw		Swift, G.W., Ward, W.C., "Simple Harmonic Analysis of Regenerators," Journal of Thermophysics and Heat Transfer, Vol. 10, No. 4, Oct. - Dec. 1996, pp. 652-662.
zw		Garrett, S., Perkins, D., Gopinath, A., "ThermoAcoustic Refrigerator Heat Exchangers: Design, Analysis and Fabrication," Physics Dept. - Code PH/Gx, Naval Postgraduate School, Monterey, CA, pp. 375-379.

EXAMINER <i>Smith C Doehl</i>	DATE CONSIDERED <i>3-16-06</i>
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<i>W</i>		4,450,685	5/1984	Corey	60	520		
<i>W</i>		4,489,553	12/1984	Wheatley et al.				
<i>W</i>		4,490,983	1/1985	Gifford et al.				
<i>W</i>		4,599,551	7/1986	Wheatley et al.				
<i>W</i>		4,625,517	12/1986	Miller				
U.S. PATENT APPLICATION PUBLICATIONS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
FOREIGN PATENT DOCUMENTS								
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)								
<i>W</i>		Swift, G., Migliori, A., Wheatley, J., "Liquid Metal Thermoacoustic Engine," Condensed Matter and Thermal Physics Group, Los Alamos National Laboratory, Los Alamos, NM						
<i>W</i>		Swift, G., "Analysis and Performance of a Large Thermoacoustic Engine," J. Acoust. Soc. Am. 92(3), Sept. 1992, pp. 1551-1563						
EXAMINER <i>William C. Davis</i>				DATE CONSIDERED <i>3-16-06</i>				
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U.S. PATENT DOCUMENTS								
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<i>W</i>		4,686,407	8/1987	Ceperley				
<i>W</i>		4,722,201	2/1988	Hofler et al.				
<i>W</i>		4,858,441	8/1989	Wheatley et al.				
<i>W</i>		4,858,717	8/1989	Trinh et al.				
<i>W</i>		4,953,366	9/1990	Swift et al.				
U.S. PATENT APPLICATION PUBLICATIONS								
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)								
<i>W</i>		Swift, G., "Thermoacoustic Engines and Refrigerators," Physics Today, Jul. 1995, pp. 22-28						
<i>W</i>		Swift, G., "Thermoacoustic Engines," Journal of Acoustical Society of America 84(4), Jul. 1988, pp. 1145-1180						
EXAMINER <i>William C Doenh</i>				DATE CONSIDERED <i>3-16-06</i>				
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				U.S. PATENT DOCUMENTS			
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
<i>me</i>	5,165,243	11/1992	Bennett				
<i>me</i>	5,174,130	12/1992	Lucas				
<i>me</i>	5,269,147	12/1993	Ishizaki et al.				
<i>me</i>	5,295,355	3/1994	Zhou et al.				
<i>me</i>	5,303,555	4/1994	Chrysler et al.				
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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
<i>me</i>	Garrett, S., Adeff, J., Hofer, T., "Thermoacoustic Refrigerator for Space Applications," Journal of Thermophysics and Heat Transfer, Vol. 7, No. 4, Oct. - Dec. 1993, pp. 595-599						
<i>me</i>	Backhaus S., Swift, G., "A Thermoacoustic Stirling Heat Engine," Nature, Vol. 399, May 27, 1999, www. nature.com, pp. 335-338						
EXAMINER <i>William C. Dorsch</i>				DATE CONSIDERED 3-16-06			
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aw	5,319,938	6/1994	Lucas				
aw	5,339,640	8/1994	Reinke				
aw	5,357,757	10/1994	Lucas				
aw	5,369,625	11/1994	Gabrielson	367	140		
aw	5,389,844	2/1995	Yarr et al.				

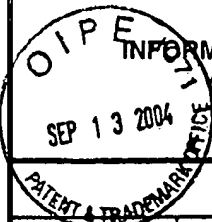
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aw			Garrett, S., "Reinventing the Engine," Nature, Vol, 399, May 27, 1999, www.nature.com, pp. 303-305
aw			Backhaus, S., Swift, G., "New Varieties of Thermoacoustic Engines," Condensed Matter and Thermal Physics Group, Los Alamos National Laboratory, Los Alamos, NM, Jul. 2002, pp. 1-8

EXAMINER <i>William C. Dault</i>	DATE CONSIDERED <i>3-16-06</i>
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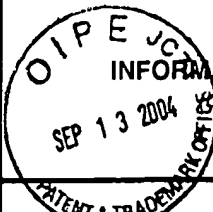
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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
22	5,456,082	10/1995	Keotian et al.	—	—		
22	5,502,968	4/1996	Beale	—	—		
22	5,515,684	5/1996	Lucas et al.	—	—		
22	5,647,216	7/1997	Garrett	—	—		
22	5,673,561	10/1997	Moss	—	—		
U.S. PATENT APPLICATION PUBLICATIONS							
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	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)							
22			Backhaus, S., Swift, G., "A Thermoacoustic-Stirling Heat Engine: Detailed Study," J. Acoust. Soc. Am. 107(6), Jun. 2000, pp. 3148-3166				
22			Backhaus S., Swift, G., "Fabrication and Use of Parallel Plate Regenerators in Thermoacoustic Engines," Proceedings of IECEC '01, 36th Intersociety Energy Conversion Engineering Conference, July 29 - Aug. 2, 2001, Savannah, GA, pp. 1-5				
EXAMINER <i>William C Doenh</i>				DATE CONSIDERED <i>3-16-06</i>			
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U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
RW	5,701,743	12/1997	Hagiwara et al.				
RW	5,813,234	9/1998	Wighard				
RW	5,857,340	1/1999	Garrett				
RW	5,901,556	5/1999	Hofler				
RW	5,953,920	9/1999	Swift et al.				
U.S. PATENT APPLICATION PUBLICATIONS							
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RW			Wakeland, R., Garrett, S., "Lessons From a Thermoacoustic Refrigeration Demonstration Device," The Pennsylvania State University Applied Research Laboratory, Technical Report No.: TR 98-005, Dec. 1998, pp. 1-117				
RW			Swift, G., Gardner, D., Backhaus, S., "Acoustic Recovery of Lost Power in Pulse Tube Refrigerators," J. Acoust. Soc. Am. 105(2), Pt. 1, Feb. 1999, pp. 711-724				
EXAMINER <i>W. H. C. Deen</i>				DATE CONSIDERED <i>3-16-06</i>			
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20		5,953,921	9/1999	Garrett				
20		5,996,345	12/1999	Hofler				
20		6,032,464	3/2000	Swift et al.				
20		6,059,020	5/2000	Jairazbhoy et al.				
20		6,079,214	6/2000	Bishop				
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		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)								
25		Gardner, D. Swift G., "Use of Inertance in Orifice Pulse Tube Refrigerators," Cryogenics 37 (1997), 1997 Elsevier Science Limited, pp. 117-121						
EXAMINER <i>Will C Doehl</i>				DATE CONSIDERED <i>3-16-06</i>				
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rw	6,145,320	11/2000	Kim	—	—		
rw	6,233,946	5/2001	Masuda	—	—		
rw	6,307,287	10/2001	Garrett et al.	—	—		
rw	6,314,740	11/2001	De Bloc et al.	—	—		
rw	6,385,972	5/2002	Fellows	—	—		

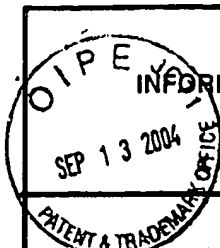
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rw	2001/0025494	10/2001	Sinclair et al.	—	—		
rw	2002/0166325	11/2002	Corey	—	—		
rw	2002/0178736	12/2002	Corey et al.	—	—		

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							YES	NO

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<i>MS</i>		6,490,881	12/2002	Sinclair et al.				
<i>MS</i>		6,725,670	4/27/2004	Smith et al.	62	6		
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